

**THAMIARAEA PARALIRA, A NEW SPECIES FROM NORTH AMERICA, AND
NEW DISTRIBUTIONAL AND HABITAT DATA FOR OTHER NEARCTIC
SPECIES OF THAMIARAEA (COLEOPTERA: STAPHYLINIDAE)**

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Abstract.—A new species of aleocharine rove beetle, *Thamiaraea paralira*, from New York and Mississippi, is described and illustrated. It is distinguished from *T. lira* Hoebeke, to which it is very similar, by its smaller body size and by the distinct dentation of the apical margin of the male tergum VIII. New distributional data for *T. americana* Bernhauer (Kansas) and *T. lira* (Kansas, Mississippi, North Carolina, Wisconsin, and Ontario) are provided. Specimens of both species have been taken from fermenting sapflows (slime fluxes), one of the principal habitats of species of the genus.

Key Words: Coleoptera, Staphylinidae, *Thamiaraea*, new species, distribution, habitat

Until recently the only recorded Nearctic species of *Thamiaraea*, a predominantly Old World genus of athetine staphylinids, was *T. americana* Bernhauer which was known from only the type locality of Opelousas, Louisiana. In 1988, a second North American species, *T. lira* Hoebeke, was added to the fauna and described from Pennsylvania, and additional habitat and distributional data were reported for *T. americana*. Ongoing curation of the unidentified Aleocharinae in the collections of Cornell University, Mississippi State University, and University of Wisconsin-Madison, and a recent examination of material sent to me by Dr. James S. Ashe (Snow Entomological Museum, University of Kansas, Lawrence) have revealed specimens of yet another undescribed species, and new distributional and habitat data for *T. americana* and *T. lira*.

***Thamiaraea paralira* Hoebeke,
NEW SPECIES**

Diagnosis.—Agreeing with structural characters of the genus as provided by Hoe-

beke (1988). Males are easily recognized from those of the other two North American species (*T. americana* and *T. lira*) by the distinctive apical margin of the eighth tergum (Fig. 6), and by their smaller body size (less than 3.0 mm).

Description.—Body color dark castaneous to reddish-brown, with head and abdominal segments VI–VIII dark brown. Antennae yellowish-brown with apical articles darker. Mouthparts and legs uniformly yellowish-brown. Dorsum of head, pronotum and elytra densely clothed with pale, short, appressed setae. Length 2.4–2.9 mm (\bar{x} = 2.6 mm, n = 4).

Head (Fig. 1) broad across eyes (Ratio L/W = 0.66). Eyes large, broadly convex, prominent, and with short pile. Dorsal pubescence of microsetae moderately dense, directed medially. Microsculpture (Fig. 2) faintly visible, consisting of polygonal pattern of microlines; surface glossy between uniformly distributed punctures. Antenna moderate in length, reaching anterior third of elytron when extended posteriorly; articles loosely organized; articles I–III elon-

gate, cylindrical; articles IV–V subquadrate, slightly wider than long; articles VI–X becoming increasingly transverse; article XI obconical, pointed apically, slightly longer than IX and X combined.

Pronotum broadly transverse (Ratio L/W = 0.67), flattened dorsally, and with a slight median impression; anterior margin truncate to slightly emarginate; lateral margins broadly rounded, broadest at the middle; posterior margin broadly arcuate with very slight sinuations toward outer angles; surface dull due to microsculpture consisting of polygonal pattern of microlines (as in Fig. 2); pubescence pattern consisting of narrow strip of microsetae along median line directed caudally, and remaining microsetae directed laterocaudally from median line and narrow band of microsetae along posterior margin directed laterally from median line.

Elytra (Fig. 3) slightly broader than pronotum; microsculpture similar to that of pronotum; pubescence of dense microsetae directed caudally.

Abdominal terga III–V (Fig. 4) at base with shallow, transverse impressions with faint microsculpture consisting of interconnecting, transverse microlines; impressions smooth, impunctate; remainder of terga III–V moderately punctured; terga VI–VIII (Fig. 5) with very faint microsculpture basally, smooth and glossy, and more sparsely punctured than preceding terga; apical margin of terga III–VI with row of long, caudally directed setae.

Male.—Median lobe and paramere of aedeagus as in Figs. 7 and 8, respectively.

Female.—Unknown.

Secondary sexual characteristics.—*Male*:

Head with setiferous sex patch on frons (Figs. 1, 2). Apical margin of tergum VIII (Fig. 6) with a short, robust, sublateral tooth on each side, and a pair of short, blunt lobes at middle. Eighth tergal disc behind median apical lobes flat or slightly impressed along median line.

Distribution.—Known only from a single

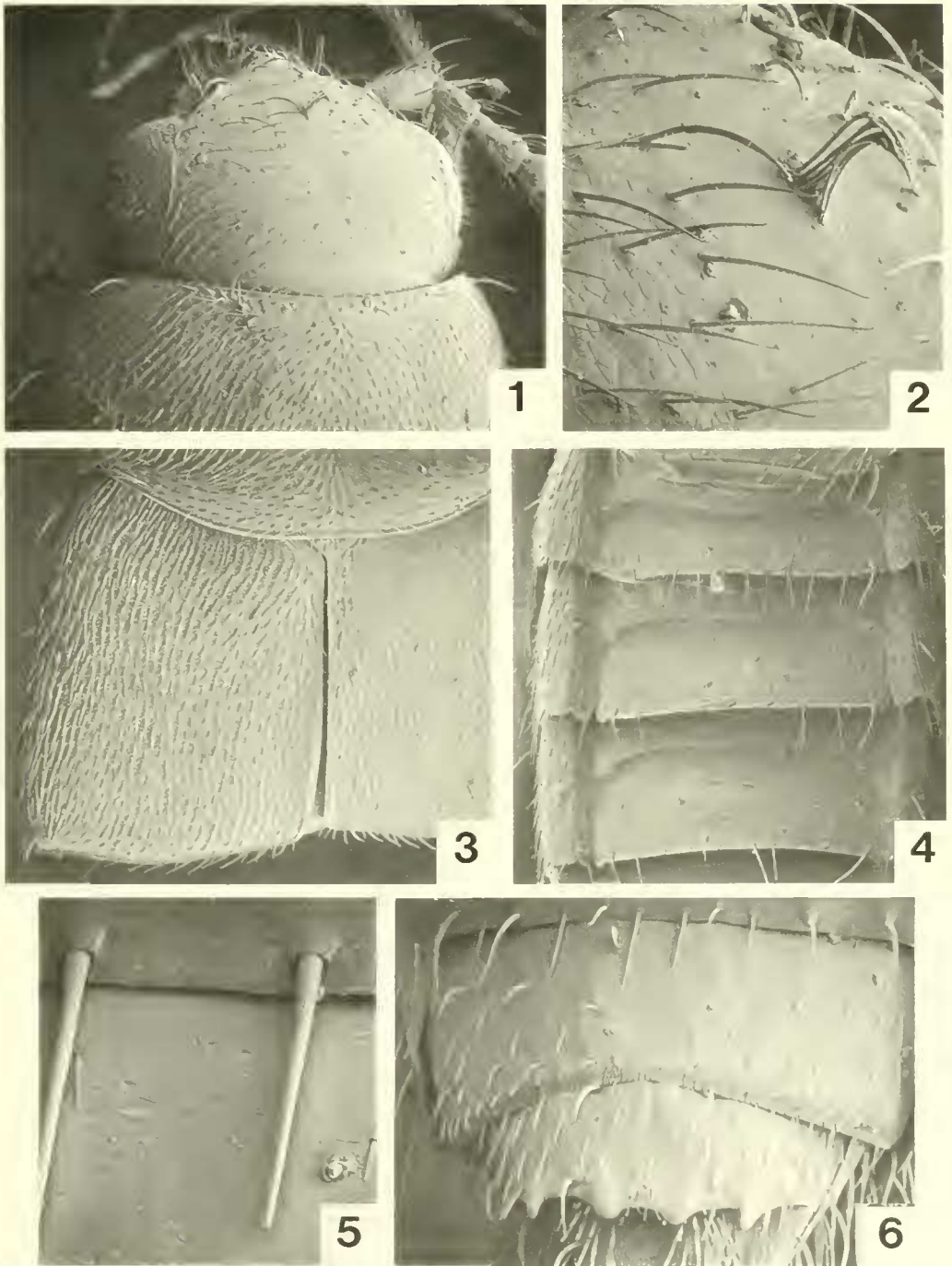
locality in southeastern New York in Westchester County, and from a single locality in northern Mississippi in Pontotoc County (Fig. 9).

Type material.—Holotype, male, with labels: Yonkers, N.Y., May 29 1938, H. Dietrich/in flowers of *Calycanthus fertilis*/HOLOTYPE *Thamiaraea paralira* n. sp., desig. E. R. Hoebeke 1993. Type deposited in the Cornell University Insect Collection, Ithaca, New York.

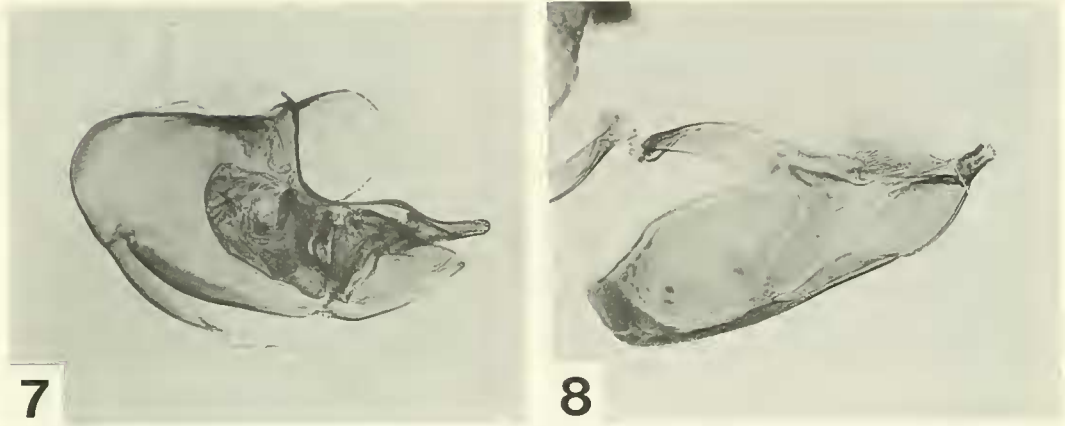
Paratypes.—5 males: Same data as for holotype; deposited in the Cornell University Insect Collection. 1 male: Miss[issippi], Pontotoc Co., 1 mi SE Ecu, 18-XII-1980, W. H. Cross, pitfall trap in deciduous woods, 4771A-1; deposited in the insect collection of Mississippi State University, State College.

Etymology.—Combination of the Greek *para* (near to) and the species epithet *lira* (from *Thamiaraea lira* Hoebeke), and referring to the close resemblance of this new species to *T. lira*.

Remarks.—I initially believed that a series of 22 specimens of *Thamiaraea*, all taken from flowers of *Calycanthus fertilis* Walt. (Calycanthaceae, Carolina Allspice) at Yonkers, New York, were comprised exclusively of *T. lira*. However, after closer examination the series was found to be a mixture of two very similar, but distinct, species. The only reliable means of separating them are differences chiefly in body size and in male secondary characteristics (tergum VIII). Males of *T. lira* have the apical margin of tergum VIII with a long, slender tooth on each side, a pair of prominent, rounded lobes at the middle, and a broad, deeply-sulcate ridge along the midline of the tergal disc (cf. Fig. 20, Hoebeke 1988: 23). In contrast, males of *T. paralira* have the apical margin of tergum VIII with a very short, robust tooth on each side, a pair of rather blunt, short median lobes at the middle, and (in some specimens) a slightly impressed median line bordered on each side



Figs. 1-6. *Thamiaraea paralira* n. sp., male. 1, Head and pronotum, 131 \times . 2, Setiferous sex patch on dorsum of head, and adjacent integument showing microsculpture, 552 \times . 3, Elytra, 128 \times . 4, Abdominal terga III-V, 117 \times . 5, Microsculpture at base of tergum VII, 1030 \times . 6, Apical margin of tergum VIII, 194 \times .



Figs. 7, 8. *Thamiaraea paralira* n. sp., male genitalia. 7, Median lobe of aedeagus. 8, Paramere of aedeagus.

by a vague, raised area (Fig. 6). Male genitalic characters of both species are very similar.

Although there were 7 females also included in the series of 22 specimens, all were identified as *T. lira* based on the dissection and examination of the spermatheca. Thus, female specimens of *T. paralira* still remain unknown. An additional male specimen of this new species (Pontotoc Co., MS) was discovered among unidentified Aleocharinae in the insect collection of Mississippi State University.

New distributional data for *Thamiaraea*.—The locality records given below extend the geographic ranges of the known Nearctic species of *Thamiaraea*. Following each record, the number (and sex) of each specimen examined, and an acronym for the specimen repository (SEMC = Snow Entomological Museum, University of Kansas; CUIC = Cornell University Insect Collection; MUIC = Mississippi State University; and UWEM = University of Wisconsin—Madison) are provided.

Thamiaraea americana, originally described from Opelousas, Louisiana, and later listed from North Carolina (Orange Co., Chapel Hill) (Hoebeke 1988), is now recorded from the following new localities:

UNITED STATES: Kansas: Douglas

Co., 7 km S. Lawrence, 30-VIII-1992, J. S. Ashe (1 male, 7 females, SEMC); 2 mi. N. Baldwin, 2-V-1986, J. Pakaluk (1 male, SEMC).

Thamiaraea lira was known previously only from the type of locality of Arendtsville, Pennsylvania. This species is now recorded from the following additional localities:

UNITED STATES: Kansas: Douglas Co., 7 km S. Lawrence, 30-VIII-1992, J. S. Ashe (1 male, 1 female, SEMC). Mississippi: Pontotoc Co., 1 mi. SE Ecrú, 23-X-1980, G. L. Snodgrass, ex pitfall trap in deciduous woods and in swamp (3 males, 3 females, MUIC); same locality, 15-VIII-1980, W. H. Cross, ex pitfall trap in deciduous woods and in swamp (2 females, MUIC); same locality, 3-VII-1980, W. H. Cross, ex pitfall trap in deciduous woods (1 male, MUIC). New York: Westchester Co., Yonkers, 29-V-1938, H. Dietrich (8 males, CUIC). North Carolina: Edgecombe Co., 2 mi. NW Tarboro, 7-IX-1979, W. H. Cross, ex pitfall trap peripheral to cult[ivated]. cotton (1 male, MUIC). Wisconsin: Dane Co., U. of W. campus, 17,24,31-V/14-VI/10-VIII/3,10,17,22-X-1954, L. H. McMullen, ex banana trap (10 males, 6 females, UWEM). Marathon Co., Rib Mtn. St. Pk., 26-VIII/10,17,24,30-IX/6-X-1954, Y. Sedman, ex



Fig. 9. Known distribution of Nearctic *Thamaraea*.

banana trap (20 males, 31 females, UWEM). *Wood Co.*, no specific locality (only "GSN"), 6,15,22-VII/20-VIII/11,30-IX-1954, L. H. McMullen, ex banana trap (5 males, 4 females, UWEM).

CANADA: Ontario: Wentworth Co., Stoney Cr., 2-VI-1973, H. Frania (3 males, 2 females, SEMC).

Habitat data.—Various insects are regular visitors to sap exudations, or slime flux-

es, of injured or diseased trees (Wilson 1926, Cole and Streams 1970). Among the Coleoptera, numerous records exist for species of Nitidulidae, cetonine Scarabaeidae, Elateridae, Lucanidae, Cerambycidae, and Curculionidae occurring in this habitat (Wilson 1926, Cole and Streams 1970, Ratcliffe 1970, 1985). In the European literature, there are copious notes and records of a wide range of species of Staphylinidae at-

tracted to slime fluxes and sap of trees (Palm 1951, 1959, Horion 1963, 1965, 1967, Koch 1989).

Few habitat records are documented for species of *Thamiaraea*. In the United Kingdom, Keilen (1921: 57) noted that the wound of an elm tree and its decomposed sap were "visited by the predaceous larvae of two Staphylinidae—one belonging probably to the genus *Quedius* sp. (subfamily Staphylininae), and the other being possibly a *Thamiaraea* sp. (subfamily Aleocharinae)." The British *Thamiaraea* (*T. cinnamomea* Gravenhorst and *T. hospita* Märk.) have been reported "at the exuding sap of trees burrowed by the larvae of the moth *Cossus ligniperda*" (Cossidae) (Joy 1932: 50). I (Hoebeke 1988) documented North Carolina specimens of *T. americana* "associated with slime flux on a trunk of *Quercus alba* L." (white oak).

Adults of *T. americana* and *T. lira*, collected in Douglas County, Kansas (new distributional records reported herein), were found on several occasions at a fermenting sapflow of an oak (J. S. Ashe, *pers. comm.*). In addition, 11 aleocharine larvae also were associated with the adults of these two species. Since no other aleocharine adults were found at this sapflow, J. S. Ashe (*pers. comm.*) considers this larval association a valid one. Because both adult and larvae of *Thamiaraea* occur in slime fluxes of trees, it appears likely that this is one of the principal habitats of species of this genus. Previously, no larvae of *Thamiaraea* were known.

In addition to slime fluxes, other known habitat/ecological records for *Thamiaraea* species include rotting fungi; rotting bananas in pitfalls; pitfall traps in deciduous woods and in swamp, and pitfall traps peripheral to cultivated cotton; and inflorescences of *Calycanthus fertilis* (a cultivated, deciduous shrub with aromatic bark and fragrant, reddish-brown flowers).

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